# Copy for the designated Office (DO/US) Pr ENT COOPERATION TREA

PALLENT COOPER			
РСТ	From th	e INTERNATIONAL BU	REAU
NOTIFICATION OF THE RECORDING OF A CHANGE  (PCT Rule 92bis.1 and Administrative Instructions, Section 422)  Date of mailing (day/month/year)	Hase Impe 15-19 Lond	H, David, Allan Itine Lake & CO. rial House I Kingsway on WC2B 6UD AUME-UNI	
26 January 2001 (26.01.01)	<u> </u>		
Applicant's or agent's file reference WO 95.0115		IMPORTANT NOTIF	ICATION
International application No.		nal filing date (day/month/ye	ar)
PCT/EP00/05513	13 J	une 2000 (13.06.00)	
The following indications appeared on record concerning:      the applicant the inventor  Name and Address	X the ager	the commo	n representative State of Residence
MENES, Catherine Etudes et Productions Schlumberger Division Dowell 26, rue de la Cavée BP 202		Telephone No. 33 1 45 37 22 53 Facsimile No.	
F-92142 Clamart Cedex France		33 1 45 37 20 10 Teleprinter No.	
2. The International Bureau hereby notifies the applicant that to X the person X the name X the ad		the nationality	concerning: the residence
Name and Address		State of Nationality	State of Residence
NASH, David, Allan Haseltine Lake & CO. Imperial House 15-19 Kingsway		Telephone No. 44 117 910 3200	
15-19 Kingsway London WC2B 6UD United Kingdom		Facsimile No. 44 117 910 3201	
		Teleprinter No.	
3. Further observations, if necessary:			
4. A copy of this notification has been sent to:			
X the receiving Office		X the designated Offices	
the International Searching Authority		the elected Offices cor	cerned
the International Preliminary Examining Authority		other:	
The International Bureau of WIPO	Authorize	d officer	toe Etienne

Facsimile No.: (41-22) 740.14.35

34, chemin des Colombettes 1211 Geneva 20, Switzerland Athina Nickitas-Etienne

Telephone No.: (41-22) 338.83.38

# FENT COOPERATION TREAT

#### **PCT**

#### NOTIFICATION OF ELECTION

(PCT Rule 61.2)

### From the INTERNATIONAL BUREAU

To:

Commissioner **US Department of Commerce** United States Patent and Trademark Office, PCT 2011 South Clark Place Room CP2/5C24 Arlington, VA 22202 **ETATS-UNIS D'AMERIQUE** 

18 June 1999 (18.06.99)

Office

Date of mailing (day/month/year) 26 February 2001 (26.02.01)	in its capacity as elected		
International application No. PCT/EP00/05513	Applicant's or agent's file reference WO 95.0115		
International filing date (day/month/year)	Priority date (day/month/year)		

Applicant

BRAND, Fabien, J. et al

13 June 2000 (13.06.00)

	The decimand Office is hereby notified of its election made:
1.	The designated Office is hereby notified of its election made:
	X in the demand filed with the International Preliminary Examining Authority on:
	15 January 2001 (15.01.01)
	in a notice effecting later election filed with the International Bureau on:
2.	The election X was
	was not
	made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

F. Baechler

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38



# **PCT**

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	FOR FURTHER see Notification	of Transmittal of International Search Report			
(Form PCT/ISA/220) as well as, where applicable, item 5 below.					
WO 95.0115	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)			
International application No.					
PCT/EP 00/05513	13/06/2000	18/06/1999			
Applicant					
SOFITECH N.V.					
according to Article 18. A copy is being tr  This International Search Report consists	_				
Basis of the report					
a. With regard to the language the	international search was carried out on the	basis of the international application in the			
language in which it was filed, un	less otherwise indicated under this item.				
the international search v	vas carried out on the basis of a translation o	of the international application furnished to this			
Authority (Rule 23.1(b)).  b. With regard to any nucleotide at	nd/or amino acid sequence disclosed in the	e international application, the international search			
was carried out on the basis of the	e sequence listing:				
	contained in the international application in written form.  filed together with the international application in computer readable form.				
· · · · · · · · · · · · · · · · · · ·					
I ——i	furnished subsequently to this Authority in written form.				
furnished subsequently t	furnished subsequently to this Authority in computer readble form.  the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the				
international application	as filed has been furnished.				
the statement that the in furnished	the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished				
2. Certain claims were fo	und unsearchable (See Box I).				
3. Unity of invention is la	cking (see Box II).				
4. With regard to the <b>title</b> ,	Lucino di buotto a anglia t				
	submitted by the applicant.				
the text has been estable	ished by this Authority to read as follows:				
5. With regard to the abstract,					
X the text is approved as	submitted by the applicant.	bority as it appears in Boy III. The applicant may			
the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.					
6. The figure of the <b>drawings</b> to be pu	blished with the abstract is Figure No.				
as suggested by the ap		None of the figures.			
	ailed to suggest a figure.				
because this figure bett	er characterizes the invention.				

### INTERNATIONAL SEARCH REPORT

Internat\* Application No

PCT/EP 00/05513

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C09K7/02 E21B43/25 E21B33/138 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) C09K E21B IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, API Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages Category ° 1-6.9US 3 979 304 A (FISCHER PAUL W ET AL) Α 7 September 1976 (1976-09-07) example 8 1-6,9US 3 302 719 A (FISCHER PAUL W ET AL) A 7 February 1967 (1967-02-07) claims 1-28; example 1 1-6.9GB 2 120 302 A (DYER JOHN JAMES; VIALLS Α OTHO JEWELL) 30 November 1983 (1983-11-30) cited in the application the whole document 1-6.9US 3 878 141 A (JACKSON JACK M ET AL) Α 15 April 1975 (1975-04-15) the whole document Patent family members are listed in annex. Further documents are listed in the continuation of box C. "T" later document published after the international filing date or priority date and not in conflict with the application but Special categories of cited documents: \*A\* document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docudocument referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled other means document published prior to the international filing date but "&" document member of the same patent family later than the priority date claimed Date of mailing of the international search report Date of the actual completion of the international search 30/11/2000 22 November 2000 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, olde Scheper, B Fax: (+31-70) 340-3016

### INTERNATIONAL SEARCH REPORT

Internati Application No
PCT/EP 00/05513

Continu	PCT/EP 00/05513				
Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT					
tegory °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.			
	US 3 785 438 A (JACKSON J ET AL) 15 January 1974 (1974-01-15) cited in the application the whole document	1-6,9			
1	US 5 646 093 A (DINO DAVID JOSEPH) 8 July 1997 (1997-07-08) claims 1-9	1-6,9			
1	US 5 669 456 A (AUDIBERT ANNIE ET AL) 23 September 1997 (1997-09-23) claims 1-16	1-6,9			
E	EP 1 041 242 A (M I LLC) 4 October 2000 (2000-10-04) cited in the application the whole document	1,7-9			
	•				



# INTERNATIONAL SEARCH REPORT

PCT/EP 00/05513

Information on patent family members

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 397930	)4 A	07-09-1976	US CA US US	3882029 A 990059 A 3979305 A 3989632 A	06-05-1975 01-06-1976 07-09-1976 02-11-1976
US 33027	19 A	07-02-1967	NONE		
GB 212030	02 A	30-11-1983	NONE		
US 38781	41 A	15-04-1975	US	3785438 A	15-01-1974
US 37854	38 A	15-01-1974	US	3878141 A	15-04-1975
US 56460	93 A	08-07-1997	NONE		
US 56694	56 A	23-09-1997	FR US CA DE EP NO	2716928 A 6040276 A 2143926 A 69516921 D 0670359 A 950831 A	08-09-1995 21-03-2000 04-09-1995 21-06-2000 06-09-1995 04-09-1995
EP 10412	42 A	04-10-2000	GB AU NO	2348447 A 2078100 A 20001476 A	04-10-2000 28-09-2000 28-09-2000

# **PCT**

REC'D 09 MAR 2001

WIPO

**PCT** 

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

11

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• •	_	ent's file reference	FOR FURTHER AC	TION		ation of Transmittal of Internatio	
WO 95.0	115		FOR FURTHER AC	IION	Preliminary	Examination Report (Form PC	T/IPEA/416)
Internation	al appi	lication No.	International filing date (date	ay/mont	h/year)	Priority date (day/month/year	)
PCT/EP	00/05	513	13/06/2000			18/06/1999	
Internation C09K7/0		ent Classification (IPC) or n	ational classification and IPC				
Applicant SOFITE	CH N	.V[ET AL.]					
		ational preliminary exan smitted to the applicant		repare	d by this Inte	rnational Preliminary Exami	ining Authority
2. This	REPO	ORT consists of a total o	f 5 sheets, including this	cover s	heet.		
b	een a	mended and are the ba		sheets o	containing re	n, claims and/or drawings w ctifications made before this e PCT).	
Thes	e ann	exes consist of a total o	f sheets.				
3. This	report	contains indications rel	ating to the following item	s·			
0. 111101	_		aung to the lenething term	<b>.</b>			
	×	Basis of the report					
11		Priority					
III				elty, in	ventive step a	and industrial applicability	
V	⋈	Reasoned statement u			novelty, inve	ntive step or industrial appli	icability;
VI	$\boxtimes$	Certain documents cit					
VII		Certain defects in the i	international application				
VIII	×	Certain observations of	on the international applica	ation			
Date of sub	missio	on of the demand		Date of	completion of	this report	
15/01/20	01			06.03.2	001		
	exam	g address of the international ining authority: opean Patent Office	al	Authoriz	zed officer		SE SOLES MICHALL
<u>)</u>	D-80	) 1298 Munich +49 89 2399 - 0 Tx: 52365	66 epmu d	olde S	cheper, B		Bangson Distriction of the Control o
		+49 89 2399 - 4465		Tolopho	no No 140 80	2200 21/1	JANUE · OFFICE ELINA

Telephone No. +49 89 2399 2141

Fax: +49 89 2399 - 4465

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP00/05513

#### I. Basis of the report

<ol> <li>This report has been drawn on the basis of (substitute sheets which have been furnished to the receiviresponse to an invitation under Article 14 are referred to in this report as "originally filed" and are not at the report since they do not contain amendments (Rules 70.16 and 70.17).):         Description, pages:     </li> </ol>								
	1-1	4	as originally filed					
	Cla	aims, No.:						
	1-9	)	as originally filed					
2.	Wit lan	th regard to the <b>lang</b> guage in which the i	uage, all the elements marked above were available or furnished to this Authority in the nternational application was filed, unless otherwise indicated under this item.					
	The	ese elements were a	vailable or furnished to this Authority in the following language: , which is:					
		the language of a t	ranslation furnished for the purposes of the international search (under Rule 23.1(b)).					
		the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).						
3.	Wit inte	With regard to any <b>nucleotide and/or amino acid sequence</b> disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:						
		contained in the int	ernational application in written form.					
		filed together with t	he international application in computer readable form.					
		furnished subseque	ently to this Authority in written form.					
		furnished subseque	ently to this Authority in computer readable form.					
		☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.						
		The statement that listing has been fur	the information recorded in computer readable form is identical to the written sequence nished.					
4.	The	amendments have	resulted in the cancellation of:					
		the description,	pages:					
		the claims,	Nos.:					
		the drawings,	sheets:					
5.		This report has bee considered to go be	n established as if (some of) the amendments had not been made, since they have been eyond the disclosure as filed (Rule 70.2(c)):					



International application No. PCT/EP00/05513

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

- 6. Additional observations, if necessary:
- V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- 1. Statement

Novelty (N)

Yes:

Claims 1-9

No:

Claims

Inventive step (IS)

Yes: Claims 1-9 No: Claims

Industrial applicability (IA)

Yes: Claims 1-9

No: Claims

- 2. Citations and explanations see separate sheet
- VI. Certain documents cited
- 1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

#### VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made: see separate sheet

#### Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: US-A-3979304

D2: US-A-3302719

D3: GB-A-2120302

D4: US-A-3878141

D5: US-A- 3785438

D6: US-A-5646093

D7: US-A-5669456

- 1. D1 discloses (Example 8) a gelled water based wellbore fluid comprising a hydrophobic modified bridging agent. D1 does not disclose an hydrophobic fluid loss additive.
- 2. D2-D5 disclose hydrophobic, hydrophobically modified or oil wettable bridging materials. These documents do not disclose hydrophobic (modified) fluid loss additives.
- 3. D6 discloses hydrophobic modified polygalactomannans which are used in drilling fluids. D6 does not disclose hydrophobic, or hydrophobically modified bridging agents.
- 4. D7 discloses hydrophobic modified cellulose derivates which are used in drilling fluids. D7 does not disclose hydrophobic, or hydrophobically modified bridging agents.
- 5. The present application meets therefore the requirements of Art. 33(2) PCT since the subject-matter of the claims on file is not disclosed in the prior art.
- 6. An inventive step can be recognised since examples 9-11 show that a return permeability can only be obtained if a combination of hydrophobically modified

### **EXAMINATION REPORT - SEPARATE SHEET**

starch and hydrophobically modified bridging agents is used (when compared to comparative examples 7 and 8).

This effect cannot be derived from the prior art and the subject-matter of present claims 1-9 meets the requirements of Art. 33(3) PCT.

The present application satisfies the criterion set forth in Article 33 (4) PCT 7. because the subject matter of Claims 1-9 is industrially applicable.

#### Re Item VI

#### Certain documents cited

#### Certain published documents (Rule 70.10)

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
EP-A-1041242	04.10.2000	17.03.2000	27.03.1999

This document discloses expresses verbis the bridging agents cited in present claims 7 and 8. No check could be made whether the priority of this document was validly claimed.

#### Re Item VIII

#### Certain observations on the international application

- In the claims the same component is indicated as "bridging material", "bridging 1. agent" or "bridging solid". A consistent indication is essential in order to avoid confusion (Art. 6 PCT).
- The feature "or others" used in claim 3 is undefined (Art. 6 PCT). 2.
- The feature "e.g. poly-hydroxypropylmethacrylate", used in claim 2, is a preferred 3. embodiment and therefore subject of an additional dependent claim (Rule 13.4 EPC; PCT Examination Guidelines III-3.4).

# (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization International Bureau



## 

# (43) International Publication Date 28 December 2000 (28.12.2000)

#### **PCT**

# (10) International Publication Number WO 00/78890 A1

(51) International Patent Classification<sup>7</sup>: E21B 43/25, 33/138

C09K 7/02,

(21) International Application Number: PCT/EP00/05513

(22) International Filing Date: 13 June 2000 (13.06.2000)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 9914351.3

18 June 1999 (18.06.1999) GI

- (71) Applicant (for all designated States except CA, FR, US): SOFITECH N.V. [BE/BE]; Rue de Stalle 142, B-1180 Brussels (BE).
- (71) Applicant (for CA only): SCHLUMBERGER CANADA LIMITED [CA/CA]; 24th Floor, Monenco Place, 801 6th Avenue, S.W., Calgary, Alberta T2P 3W2 (CA).
- (71) Applicant (for FR only): COMPAGNIE DES SER-VICES DOWELL SCHLUMBERGER [FR/FR]; 50, avenue Jean-Jaurès, F-92541 Montrouge (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BRAND, Fabien, J. [FR/FR]; 35, avenue Jean Moulin, F-75014 Paris (FR).

BRADBURY, Andrew [GB/GB]; 1 Blackhall forest, Banchory, Kincardineshire AB31 6PS (GB).

- (74) Agent: MENES, Catherine; Endes et Productions Schlumberger, Division Dowell, 26, rue de la Cavée, BP 202, F-92142 Clamart Cedex (FR).
- (81) Designated States (national): AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- With international search report.
- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WATER BASED WELLBORE FLUIDS

(57) Abstract: The invention relates to water based wellbore fluids used during a hydrocarbon recovery process, such as drilling, fracturing, gravel packing and wellbore workover. According to the present invention, said wellbore fluid comprises a fluid loss additive and a bridging material that are hydrophobic in nature, hydrophobically modified or oil wettable. The wellbore fluid generates an active filter cake that once formed, is impermeable to an aqueous phase, thus reducing fluid loss and ensuring reduced damage to the formation, yet simultaneously is permeable to the back flow of hydrocarbons during a hydrocarbon recovery process.

06882/00







Your ref:

HL77466/002/DAN/CJP/eg

Application No: GB 9914351.3 Applicant:

Sofitech N.V.

Latest date for reply:

8 July 2003

Nicholas Mole Examiner: 01633 813797 Tel: Date of report: 8 January 2003

Page 1/2

97 2003 JUL 23 2003 GROUP 7 200

### Patents Act 1977

**Examination Report under Section 18(3)** 

#### **Inventive step**

The invention as defined in claims 1-6, 9 is obvious in view of what has already 1. been disclosed in the following documents:

GB 2120302 A	(DYER) see whole document; relevant to claims 1-6, 9
US 5720347	(AUDIBERT) see esp. col 1 line 63 to col. 2 line 3; relevant to
0007200	claims 1-6, 9
US 5669456 <sub>5</sub>	(AUDIBERT) see esp. col. 1 lines 56-67; relevant to claims 1-2, 4-6,
	ġ
US 4428843	(COWAN) see esp. col. 2 lines 24-32; relevant to claims 1-3, 4, 9
US 4356096	(COWAN) see esp. col. 3 lines 31-58; relevant to claims 1-3, 4, 9
SU 80-885626	(DZHIENBAEV) see WPI abstract; relevant to claims 1-2, 4-6, 9

US '347, US '456 and SU '626 disclose the use of hydrophobically-modified fluid loss additives while the remaining documents disclose hydrophobically-modified bridging materials. As acknowledged by the application it is known to have a water-based wellbore fluid having both fluid loss additive and a bridging material. Therefore there would appear to be no inventive step in hydrophobically-modifying both the fluid loss additive and the bridging material using the teaching of the above documents and hence claims 1-6 and 9 cannot be deemed inventive.

#### Clarity/support

- Claim 3 is unclear through the use of the phrase 'said starch is a polymerised starch or a starch modified by.....' which leaves it uncertain whether the 'said starch' refers to the 'hydrophobically modified starch' of claim 2.
- Claim 4 is unsupported by the description through the use of the phrase 3. 'hydrophobic' and 'organic material'.
- Claim 4 is inconsistent with claim 1 through the use of the phrase 'bridging solid' rather than 'bridging material'.
- Claim 7 is unclear through the use of the phrase 'preferably over 10°C' where this conflicts with 'over 80°C'.
- Claim 7 (and hence claim 8) is inconsistent with claim 1 through the use of the 6.







Your ref:

HL77466/002/DAN/CJP/eg

Application No: GB 9914351.3

Date of Report: 8 January 2003

Page 2/2

#### [ Examination Report contd. ]

phrase 'bridging agent' rather than ' bridging material'.

7. The description has been rendered obscure at page 6 where the given equation and its key do not appear to match.

#### Non-metric units

8. The equivalent metric values should be given alongside the non-metric values mentioned on pages 5, 7, 8, 9, 10, 11, 12, 13, 14 and 15 of your specification.